



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,877	10/06/2006	Andreas Kramer	124157	8829
27049	7590	06/10/2010	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				MCCULLEY, MEGAN CASSANDRA
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
06/10/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OfficeAction27049@oliff.com  
jarmstrong@oliff.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/538,877	KRAMER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Megan McCulley	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 18 February 2010.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-31 is/are pending in the application.  
 4a) Of the above claim(s) 1-21 and 27-31 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 22-26 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>5/14/2010; 3/4/2010</u>	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____ .

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 22-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Suga (US 2003/0105266).

Regarding claim 22: Suga teaches compound (B-1) prepared by blocking a polyisocyanate compound with an epoxy compound having a hydroxyl group (para. 136). The polyisocyanate is a reaction of aliphatic or aromatic diisocyanates (para. 51), corresponding to the instant Y2, with a dihydric alcohol (para 52), corresponding to instant Y1). The epoxy compound having a hydroxyl group and epoxy groups can be trimethylolpropane diglycidyl ether (para. 138), corresponding to the instant Y3. Therefore, q is 2, m is 1 and n is 2.

Regarding claim 23: Suga teaches ethylene glycol as the dihydric alcohol corresponding to Y1, which is an  $\alpha,\omega$ -polyalkylene glycol having C<sub>2</sub> alkylene groups.

Regarding claim 24: Suga teaches the molecular weight is 400-10000 (para. 62), which is 200-5000 OH equivalent.

Regarding claim 25: Suga teaches a one component adhesive (para. 2).

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 22-24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (U.S. Pat. 5,484,853) in view of Dalhuisen (U.S. Pat. 3,505,283).

Regarding claims 22 and 23: Chen et al. teaches a compound made from aliphatic, cycloaliphatic or aromatic polyisocyanates (col. 3 lines 60-67), which would make  $Y_2$  be aliphatic, cycloaliphatic or aromatic and  $m=2$ , reacted with low molecular weight glycols like ethylene glycol (col. 4 lines 1-5), which would make  $Y_1$  be a  $C_2$  polyalkylene glycol with  $n=2$ . The urethane prepolymer can also be end capped with a compound containing both hydroxyl and epoxy groups (col. 3 lines 39-45).

Not disclosed is a specific compound that has more than one epoxy group, which would make  $q=2$ . However, Dalhuisen teaches a similar compound end capped with epoxy resin of bisphenol A (col. 2 lines 5-30). Chen et al. and Dalhuisen are analogous art since they are both concerned with the same field of endeavor, namely epoxy end capped polyisocyanates. At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the epoxy end capping group of Dalhuisen with the urethane of Chen et al. and would have been motivated to do so for such desirable properties as rapid viscosity increase to make handling easier without curing the composition, as evidenced by Dalhuisen (col. 1 lines 40-53).

Regarding claim 24: Chen et al. teaches a propylene oxide oligomer, which would have 2 hydroxyl groups, with a molecular weight of 300-2000 Daltons (col. 4 lines 1-5). Therefore the hydroxyl number would be 150-1000 g/mol, which falls within the claimed range.

Regarding claim 26: Chen et al. teaches a two-component composition (abstract).

### ***Response to Arguments***

Applicant's arguments filed 2/18/2010 have been fully considered but they are not persuasive.

A) Applicant's argument that Suga does not teach the instantly claimed compound since Suga discloses that the polyisocyanate has a blocking agent reacted onto it before the polyepoxy compound is not persuasive. Suga teaches that an additional embodiment for the compound (B-1) does not have a blocking agent reacted (para. 140). It is an unblocked compound obtained by reacting a polyisocyanate and the epoxy compound having a hydroxyl group (para. 140). Therefore, there is at least one embodiment disclosed in Suga that compound (B-1) does not include the blocking agent of paragraphs 67 and 68).

B) In response to applicant's argument that Dalhuisen is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed

invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Chen et al. and Dalhuisen are analogous art since they are both concerned with the same field of endeavor, namely epoxy end capped polyisocyanates. The urethane resin of Chen et al. is a modified polyurethane prepolymer having an epoxy group at each end (abstract). The polyurethane prepolymer is made by reacting a compound containing an epoxy and a hydroxyl group (col. 3 lines 39-45) with a multifunctional isocyanate (col. 3 lines 60-67) and a polyol (col. 4 lines 1-5), just as in the case of the instantly claimed compound. Dalhuisen teaches a hydroxyl containing epoxy monomer (col. 1 lines 20-25) reacted with a multifunctional isocyanate (col. 2 lines 58-65). Therefore the references are analogous with each other and with the instantly claimed invention.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Megan McCulley whose telephone number is (571)270-3292. The examiner can normally be reached on Monday - Thursday 7:30-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/  
Supervisory Patent Examiner, Art Unit 1796

/M. M./  
Examiner, Art Unit 1796